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No. 114944

COLEGIO NOTARIAL 2da. CIRC.

TITLE OF THE NEW VARIETY

GRAPEVINE "90-3437"

CROSS-REFERENCE TO RELATED APPLICATIONS

Not Applicable.

STATEMENT REGARDING FEDERALLY SPONSORED  
RESEARCH OR DEVELOPMENT

Not Applicable.

SPECIFICATION

BACKGROUND OF THE NEW VARIETY

The present invention relates to a new and distinct variety of grapevine, which will hereinafter be denominated varietally as the "GRAPEVINE 90-3437", and, more particularly, to a grapevine which, with the application of Gibberelic Acid, produces seedless fruit, which are, in a typical growing year, mature for commercial harvesting and shipment approximately October 1 to October 15 in the San Joaquin Valley of central California.

The invention and development of new varieties of grapevines, as with other fruit producing varieties of plants, is a science marked by attentiveness, nurturing of the new varieties over lengthy periods of time, devotion to achieving the desired results



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The grapevine of the instant variety is believed to be a promising candidate for commercial success in respect to many of these criteria.

#### ORIGIN AND ASEXUAL REPRODUCTION OF THE NEW VARIETY

The present variety of grapevine hereof was bred under the direction of the inventor in 1989 in Delano, California, by cross pollination between the grapevine "RED GLOBE" and the grapevine "26916". The present variety of grapevine was asexually reproduced in 1990 in Delano, California from seed of the new variety produced by this cross pollination. Subsequently, the resulting grapevines of the new variety were grown in the United States of America near Delano in the San Joaquin Valley of central California in a test plot. The observations and measurements hereof were made during the 1994 through 1999 growing seasons, at the same location near Delano in the San Joaquin Valley of central California. The grapevines of the new variety have been observed by the inventor and have been found in all respects to be identical to the original plant of the new variety.

#### SUMMARY OF THE NEW VARIETY

The new grapevine of the subject invention is characterized by its productivity producing large, seedless, light red grapes which ripen for commercial harvesting and shipment approximately the same time as the "Emperor" grapevine, or

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normally approximately October 1 to October 15 in the San Joaquin Valley of central California. The new variety may be compared in certain respects with the "Emperor" grapevine. However, the new variety of the subject invention is a seedless grape in contrast with the "Emperor" grapevine which is a seeded variety, and the subject variety produces larger berry size, is darker in skin coloration and has superior flavor and crispness than in the case of the fruit of the "Emperor" grapevine.

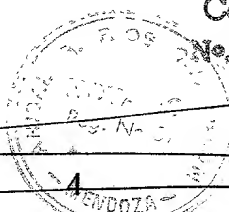
#### BRIEF DESCRIPTION OF THE DRAWING

The accompanying drawing is a color photograph of representative portions of the new grapevine of the present invention including bunches of grapes, sectioned portions of individual berries thereof, typical foliage and segments of canes all of the new variety.

#### DETAILED DESCRIPTION

Referring more specifically to the viticultural details of this new and distinct variety of grapevine, the following has been observed under the ecological conditions prevailing at the described location near Delano in the San Joaquin Valley of central California. All major color code designations are by reference to the Dictionary of Color, by Maerz and Paul, First Edition, 1930. Common color names are also occasionally employed.

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## GRAPEVINE

### GENERALLY:

Size – The test grapevines of the subject variety are planted approximately 7.9 feet (240.79 cm) apart in the test rows and extend 11.8 feet (359.66 cm) apart. The grapevine canopy extends out into the row approximately 3.28 feet (99.97 cm). The grapevines are growing on their own roots and were four (4) years of age in 1999.

Vigor – Very vigorous. The new variety is slightly more vigorous than the “Thompson Seedless” grapevine and about equal to the “Emperor” grapevine.

Productivity - Very productive, slightly more productive than both the “Thompson Seedless” grapevine and the “Emperor” grapevine. The test grapevines have been trained to a quadrilateral cordon production system.

### TRUNK:

Size - Ranges from 6.5 cm (2.54 inches) to 7.8 cm (3.04 inches) at 15 cm (5.85 inches) above ground surface.

Surface Texture - Course with a rough and somewhat shaggy surface.

Bark Color - Dark grey (15-A-6 Beaver Grey) to a lighter grey-brown (14-B-6 Camel's Hair).

### CANES:

Size - Thickness - Ranges from average to slightly above average depending



upon the degree of light exposure and height in the grapevine canopy.

Size – Diameter - Large vigorous canes ranges from 8 mm (0.32 inches) to 13 mm (0.52 inches).

Surface Texture - Mature cane is finely striated with low, fairly regular striations.

Form - Woody shoot cross sections form varies from circular to slightly elliptic.

Color - One year or older wood - Ranges from a chamois tan (11-E-5 Raffia) to a darker tan-brown (13-D-7 Oakbuff).

Internode – Length - Mature Cane - Normal.

Internode – Length – Upper Mature Sun Cane - Ranges from 8 cm (3.12 inches) to 16 cm (6.24 inches) between nodes.

#### TENDRILS:

Size – Thickness - Medium.

Size – Length – Mature Canes - Moderately long, ranging from 12 cm (4.68 inches) to 20 cm (7.8 inches).

Distribution – Discontinuous.

Form - Variable, most frequently trifid, but with numerous bifid forms present.

Color - Immature - Bronze-green (12-L-3 Pyrite Yellow) with a moderate amount of reddish anthocyanin pigmentation present.

GROWING TIPS: The tip indument is moderately pubescent.

Color -Expanding shoot tip is bright green-yellow (18-L-2 Citronelle) with a

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moderate amount of reddish anthocyanic pigmentation present.

## LEAVES

Size - Generally – Large. Measurements have been taken from large mature leaves on vigorous canes.

Average Leaf Blade Length - Ranges from 14.6 cm (5.69 inches) to 17.5 cm (6.83 inches), measured from the petiole junction to the apex of the center leaf lobe.

Color - Upwardly disposed surface - Ranges from a dark green (22-K-4) to a slightly darker green (23-C-6).

Color - Downwardly disposed surface - Lighter grey-green (21-I-5) to a darker grey-green (21-H-6).

Color - Leaf Vein - Lower mid-vein is prominent and pale green (17-G-4). The mid-vein is at times lightly tinged with a reddish-purple hue.

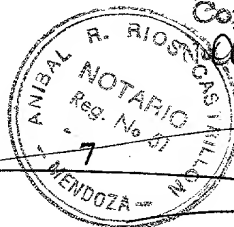
Form - Mature leaves are most frequently pentagonal in shape with the largest leaves having from five to seven lobes.

Margin Teeth – Sides - Most frequently convex in form with occasional straight-sided teeth present.

Margin Teeth – Length - Relatively large, ranging from 4 mm (0.16 inches) to 10 mm (0.4 inches).

Surface - Relatively smooth.

Petiole Sinus - Open with no basal lobe overlap. The petiole sinuses are



most frequently “U” shaped. The upper leaf sinuses are usually closed with moderate leaf overlap. The bases of the upper leaf sinuses are variable, most frequently “V” shaped, but at times “U” shaped bases can be present.

Petiole - Length - Varies from 14.2 cm (5.54 inches) to 19.4 cm (7.57 inches).

Petiole - Thickness - Ranges from 2.0 mm (0.08 inches) to 4.0 mm (0.16 inches), measured at mid-petiole.

Petiole - Color - Ranges from a pale green (17-G-5) to a pale green-yellow (17-D-3).

Petiole – Surface – Color - On mature leaves, the surface is often tinged with a purplish hue, most frequently at the distal end near the petiole juncture with the leaf blade base. This coloration can vary from a light rose (2-C-3) to a darker purple (4-J-3 Azalea).

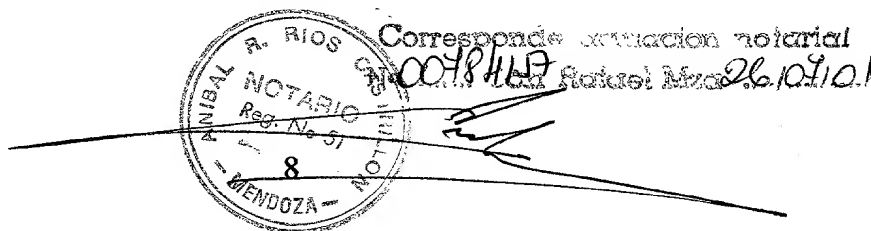
## FLORAL

### CLUSTER:

Generally - The floral cluster is moderately narrow and tapering. The first floral cluster can occur from the second to the fifth node, most frequently on node 3 or 4. The cluster frequency is high, imparting the potential for excellent productivity.

Size – Length- Ranges from 11.5 cm (4.49 inches) to 17.5 cm (6.83 inches) without the peduncle.

Size – Width - Ranges from 2.5 cm (0.975 inches) to 8.3 cm (3.24 inches).





Peduncle – Length - Can vary from 2.5 cm (0.975 inches) to 4.0 cm (1.56 inches).

Inflorescences - Hermaphroditic.

Stamens - Upright.

Anthers – Size- Average.

Date of bloom - Full bloom in 1999 was May 31, approximately one week after the “Thompson Seedless” grapevine. The 1999 growing season can be characterized as a very late developing season, approximately ten (10) days later than an average year in Delano area in the San Joaquin valley of California. This would indicate a more “normal” or “average” date of bloom of May 21 for the new variety.

Pollen - Abundant.

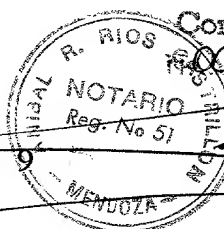
Calyptra – Separation from the flower base is complete. The duration of bloom is normal, approximately ten (10) days.

Petiole – Color – Medium green (19-K-6 Sea Foam).

Calyptra – Color - Lighter green (19-K-4).

## FRUIT

MATURITY WHEN DESCRIBED: Ripe for commercial harvesting and shipment in a normal growing season (approximately October 1 to October 15 near Delano in the central valley of California. The date of maturity is similar to that of the commercial variety “Emperor” grapevine. The 1999 growing season was an unusually late year for maturity



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of most varieties and in which the maturity period of the new variety was approximately October 10 to October 25.

#### CLUSTER – PRIMARY BUNCHES:

Generally – Ranges from above medium to large.

Bunch – Length - Ranges from 22 cm (8.58 inches) to 32 cm (12.48 inches) without the peduncle.

Bunch – Width - Ranges from 15 cm (5.85 inches) to 21 cm (8.19 inches).

Bunch – Density - Moderately loose with numerous visible pedicels.

Berry – Number - Ranges from 85 to as many as 175 berries in the largest clusters.

Bunch – Peduncle – Length - Ranges from 3.5 cm (1.365 inches) to 8.1 cm (3.159 inches).

Bunch – Peduncle – Thickness - Ranges from 2.5 mm (0.1 inches) to 5.0 mm (0.2 inches).

Peduncle – Color - Medium green-brown (14-K-1).

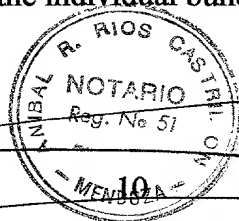
#### BERRY:

Size - Large.

Form – Lateral - Quite uniformly oval.

Form – Cross-sectional - Globose.

Uniformity - Good within the individual bunch.



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Size – Diameter - Ranges from 20 mm (0.8 inches) to 25 mm (1 inch).

Size – Length- Ranges from 25 mm (1 inch) to 30 mm (1.2 inches).

Berry – Color – Generally - Overall berry skin coloration is relatively uniform.

Most exposed berries are 100% surface colored. The shaded side of interior berries can range from 70% to 100% colored.

Skin – Color – Generally - All berry surfaces are covered with a very light greyish, waxy bloom.

Skin – Color - Ranges from a bright purple-red (6-G-4) to a slightly darker (6-J-4).

Ground – Color – Generally - Ranges from 5% to 30% of the surface on interior berries.

Ground – Color – Usually a very pale yellow with a slight greenish tint (11-K-1). Often these ground color areas can have a very lightly blushed surface.

Pedicle – Size - Medium.

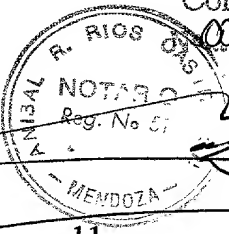
Pedicle – Length – Ranges from 8.0 mm (0.32 inches) to 13.0 mm (0.52 inches).

Pedicle – Thickness – Ranges from 1.5 mm (0.06 inches) to 2.5 mm (0.1 inches) at mid-pedicle.

Pedicle – Color - Greenish-brown (14-K-3 Serpentine Green).

Pedicle - The berry attachment is very strong. Almost no shatter occurs at full maturity.

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## SECONDARY BUNCHES :

The secondary bunches are numerous. Berry shape is similar to the berries in the primary clusters. Berry size in the secondary clusters is smaller than that in the primaries. Color of the berries in the secondaries is darker than in the primaries and almost all berries are fully colored. Color ranges from a purple (6-J-5 Rubaiyat) to a darker (7-E-5 Mauverose). Secondary bunch form is irregular. Secondary bunches can range from 4 cm (1.56 inches) to 12 cm (4.68 inches) in width and from 7 cm (2.73 inches) to 14 cm (5.46 inches) in length. Berry counts vary substantially from just a few, six (6) to ten (10), up to thirty (30) berries or more.

## FLESH:

Flesh Color - Variable, most frequently it is a combination of generally clear or translucent areas with colored areas. The translucent areas are often, but not always, near the stem end of the berry and the colored areas are often next to, or 2 mm (0.08 inches) to 4 mm (0.16 inches) under, the skin surface. The colored areas range from a light rose (3-E-2) to a darker rose (3-H-2).

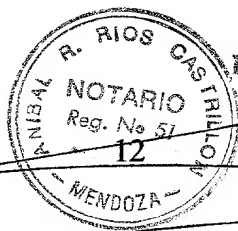
Juice – Color - Usually clear, but at times it can become slightly pink at advanced berry maturity.

Juice Production - Juicy.

Flavor - Sweet and mild with excellent balance.

Aroma - Bunch aroma is slight to lacking.

Texture - Very good. The individual berries are crisp, firm and juicy.

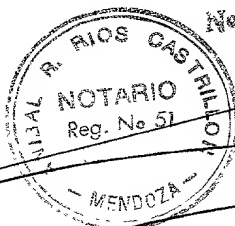


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Seeds - Usually absent.

USE: High quality seedless table grape, well suited for commercial production.

Although the new variety of grapevine possesses the described characteristics noted above as a result of the growing conditions prevailing near in the central part of the San Joaquin Valley of California, it is to be understood that variations of the usual magnitude and characteristics incident to changes in growing conditions, irrigation, fertilization, pruning, pest control, climatic variation and the like are to be expected.



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